in its first stage and second stages by the antitoxic treatment, but drugs have but little curative effect in the later stages of this disease, and Murphy's nitrogen treatment has already proved a *failure*. Nosophen has been proved harmless; antinosin has been used in solution of 2.5 per cent. strength without producing irritation. The author has used it exclusively as a disinfectant and cleansing solution in the nasal passages. Eudoxine, the bismuth salt of nosophen, is an excellent remedy in diarrhœa, experiments having proved that by the action of the gastric juice *stable* salts of bismuth are formed, the nosophen passing on unaltered to the intestine.

THERAPEUTICS.

UNDER THE CHARGE OF

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Antistreptococcic Serum in the Treatment of Smallpox.—Dr. W. J. Lindsay, finding that death most often occurs about five days after the pustules have dried and have begun to be absorbed, believes it to be caused largely by reinforcement of the specific virus of variola with pyogenic toxins. Patients were chosen who from analogy might have been expected to die, all exhibiting confluence early in the pustular stage. Antistreptococcic serum was injected aseptically into the subcutaneous tissue of the abdominal wall, just before or coincident with pustulation, repeated at intervals of twelve to twenty-four hours. Digitalis with tincture of iron chloride or liquor strychnine was given four-hourly. In no instance were more than three injections given. Patients thus treated exhibited a shorter period of absorption, the intensity of the toxæmia is lessened, and the tendency to cardiac failure is diminished. Convalescence begins sooner and is rapid. Of six patients so treated none of the four recovering developed abscesses, nor was there local pain, arthritis, or hyperpyrexia.—*The British Medical Journal*, 1899, No. 2002, p. 1144.

Malta Fever Treated with Malta Fever Antitoxin.—Drs. E. D. Fitzgerald and J. H. Ewart report that after continuous treatment with calomel and phenacetin no lasting improvement resulted.

The germ of Malta fever was not detected in the blood, but the results of treatment left no doubt of the correctness of the diagnosis. Five drachms of the antitoxin were injected into the subcutaneous tissue of the abdomen, the temperature having been subnormal for five days. The following day 5 drachms were again injected, the temperature being 99°. For the next few days the temperature varied between 98° and 100° F. One week after the first injection was given a severe urticaria first appeared on the abdomen in the vicinity of the site of the injections. A febrile movement continued, and on the expiration of the second week another 5 drachms of antitoxin were injected. The temperature rose to 104.6° F., and the patient was very ill. The urticarial rash was more pronounced, the joints were swollen and painful. There was a slight cough, and the expectoration was tinged with blood. The authors suggest an internal urticaria, causing exudation from the serous membranes involved. A few days later the patient was more comfortable; the temperature fell to normal, and he soon became convalescent. Subsequently a subnormal temperature developed, lasting for several weeks, but there was no return of other symptoms. A blood examination was made. Before the first injection of antitoxin the hæmoglobin was 120, and the corpuscles 7.3. A second examination after the second injection showed hæmoglobin 105 and corpuscles 6.93.—*The Lancet*, 1899, No. 3946, p. 1024.

Tetanus Antitoxin.—DR. E. TAVEL states that subcutaneous injection gives temporary immunity which may last from four to six weeks, and may be continued by repeated injections. This should be employed in those instances when the character of the injury or opportunity for infection suggests danger. It is useful only against tetanus infection, so that ordinary aseptic measures should not be neglected. The amount required is 2 drachms, and this may be repeated a week later. When tetanus is fully established this treatment has its limitations, and, indeed, will be successful only when the amount of toxins is not much greater than the usual fatal amount. If this is much greater and the incubation is short and severe symptoms are present, the treatment by injection will not avail because of the impossibility of injecting a sufficient quantity of the remedy. On the other hand, in intracerebral injections a smaller quantity will suffice, and the serum is rapidly brought into contact with the toxins held in the brain-substance, and can neutralize it. The necessary amount is about 1 drachm, and this may be repeated as often as is necessary. To neutralize the toxin which is circulating in the remaining portions of the body 1½ to 3 ounces of serum may be administered by intravenous injection. This is especially important if the tetanus bacilli or their toxin are still found in the wound. If intravenous injection is not practicable, subcutaneous injection in thigh, abdomen, chest, or arm may be substituted.—*Correspondenz-Blatt für Schweizer Aertze*, 1899, No. 8, S. 235.

The Therapeutic Value of Marmorek's Serum.—DR. WM. L. BAUM draws thre following conclusions: (1) In pure streptococcic injections the serum undoubtedly exercises a favorable influence on the course of the disease. (2) In mixed infections the influence of the serum was demonstrable, but it merits further trial as an adjunct to other treatment. (3) In view of the grave character of complications of non-streptococcic nature reported, ordinary rules of therapy would demand that in such cases, as with the diphtheria antitoxin, all indicated therapeutic measures must be employed, as well as the serum. (4) As erysipelas streptococci and phagocytes often exist together in the lymph channels, it is fair to assume that the influence of the serum is directly exerted bactericidally on the streptococci and not entirely through stimulation of phagocytic action. (5) The initial dose in all cases should be 5 drachms, to be followed by one-half or two-thirds of this dose, according to the indications, every twenty-four hours.—*Medicine*, 1899, vol. v. p. 23.

Arsenic in Treatment of Accidents of Thyroid Extract Administration.—M. L. MABILLE recommends the use of arsenic to counteract rapidity of heart action following overdoses of thyroid extract. Oxidation, which is so greatly increased by thyroid extract, is also much diminished by arsenic. Animals to which thyroid extract (iodothyrin) had been given exhibited on the administration of arsenic (Fowler's solution) a marked slowing of the pulse. In animals to which only the iodothyrin was given there were seen acceleration of the pulse, excitation, and trembling, a loss of weight of more than three pounds, anorexia, and gastric disturbance. Thyroid extract furnished similar results. The author recommends simultaneous exhibition of thyroid extract and arsenic, thyroidism being either avoided or ameliorated. A goitrous patient, beginning with 3 grains of thyroid gland, was taking 10½ grains after ten days. Intolerance followed; there was violent palpitation, rapid pulse, vague pain, and trembling. Beginning with two drops of Fowler's solution the dose was increased to twelve drops, and then thyroid administration was again commenced, as much as 12 grains being given. The symptoms of thyroidism disappeared. Medication was continued, with success, and no emaciation followed. The addition of arsenical preparations in relatively large doses permits the toleration of thyroid extract, often borne so badly when given alone.—*Les Nouveaux Remèdies*, 1899, No. 9, p. 195.

Gelsemium Sempervirens.—DR. N. P. BARNES maintains that this drug should receive more attention because of its great therapeutic value. One-fifth of 1 per cent. is the average amount of alkaloid in the severed root, and constitutional effects are regularly obtained from the standard fluid extract. Gelseminine, the alkaloid, is a non-crystallizable dry mass, white, alkaline, insoluble in water, but soluble in alcohol, ether, and chloroform. There are several unofficial preparations, but the official fluid extract and tincture are very satisfactory. The drug is antispasmodic, antipyretic, antineuralgic, antimalarial, analgesic, hypnotic, and diaphoretic. Through its direct action on the spinal cord, dulling and paralyzing mobility and sensibility, it is a nervous sedative and depressant. The third, fourth, fifth, and sixth cranial nerves and those supplying the genito-urinary organs are especially affected. Reflex excitability is first increased and then diminished, and finally exhausted. Small doses, one-half to one minim of the fluid extract, relax the general nervous system, relieve nervous irritation and muscular tension. Large doses, one to five minims, cause languor, enfeeble muscular action, impair sensibility, dilate the pupils, cause ptosis, and excite diaphoresis. Effects of a moderate dose disappear in three hours. Toxic doses (ten minims or more) produce vertigo, diplopia, ptosis, mydriasis, prostration and muscular relaxation, partial paralysis of sphincters, respiration, and, lastly, heart failure. Antagonists are small doses of opium, or morphine and atropine. Six to eight hours elapse before a toxic dose is fatal. It is indicated in conditions of exalted nerve function, mental excitation, and muscular tension. Early in fevers it is antipyretic and sedative. As a succedaneum to quinine in malaria it is of value, relieving the unpleasant effects of the former. The head symptoms in a commencing "cold" are dissipated in a few hours. In grippe, gelsemium controls the fever, headache, pains, and restlessness. Pain of a neuralgic or rheumatic character is relieved by this drug where there is arterial excitement or local congestion. In tic douloureux it is almost specific. Coccygodynia is often cured, and in sciatica gelsemium is useful, but not curative. Ovarian neuralgia and uterine colic (?) are efficiently treated with it. Headaches, neuralgic, congestive or periodic, are promptly relieved. With sodium bromide gelsemium is a most efficient hypnotic. Muscular spasms, such as epileptic and hysterical convulsions, are relieved. To prevent erections and chordee in gonorrhœa, gelsemium is invaluable. In catarrhal cystitis, irritable bladder, and incontinence of urine from spasm of muscular fibres gelsemium is excellent.—*Maryland Medical Journal*, vol. xli. p. 288.

Treatment of Diphtheritic Paralysis.—DR. FRANCIS HOBEN insists upon absolute rest in a well-ventilated room, good food, good air, tonics, and particularly iron in a digestible form. Strychnine should be given in full doses by the mouth, or, in severe cases, hypodermatically. Recently the nitrate in one-fiftieth of a grain dose was given subcutaneously twice daily for two weeks, and subsequently once a day for some weeks longer, with excellent results, to a child two and one-half years old. The subcutaneous method should be chosen if the constrictors of the pharynx are involved, if the heart or respiration show the toxic effects of the poison, or if the muscular incompetency is pronounced. Careful massage of the extremities will improve the cutaneous circulation and the condition of the muscles. If respiration is endangered, electricity, used with judgment and intelligence, must be employed in addition to artificial respiration and rhythmical traction of the tongue.—*Pediatrics*, 1899, No. 11, p. 50.

The Treatment of Some Climacteric Neuroses.—MR. W. J. HANDFIELD HASLETT regards a change of scene and environment as the first principle of treatment, but not travel. The patient should be much in the open air, but short of physical exhaustion. For insomnia try the open-air treatment or the warm bath at night. If persistent sleeplessness demand drugs, use paraldehyde, commencing with one-half and increasing to three drachms if necessary. The nutrition of the patient must be maintained. On examination the tongue will be found to be flabby and thickly coated; there will be acid eructations and perhaps vomiting. This condition is due to defective innervation of the alimentary tract, and the patient needs ten eggs a day, with two quarts of good milk, a quart of strong vegetable soup, with perhaps a little brandy if the heart be weak, and an occasional dose of Epsom salts, and in a week or two the tongue will be perfectly clean, and the patient gains in weight. Of tonics, nux vomica and iron ammonio-citrate are the best. If the patient is maniacal, iron is strongly contraindicated. If the symptoms of malnutrition are prominent, massage and the Weir Mitchell treatment are useful, and if there is much stupor faradic electricity often does much good. If the patient is restless and agitated by day, and especially when the skin is dry and harsh and the pulse hard, nepenthe is by far the best sedative.—*Treatment*, 1899, No. 7. p. 208.

Treatment of Headaches.—DR. R. E. PECK lays stress on the importance of recognizing that headache is usually a symptom, and that it is necessary to seek for its cause in order to effect a permanent cure. He discusses the various forms of headaches and the conditions to which they point, such as syphilis, brain tumor, malaria, and concludes by discussing hydriatic procedures for the relief of headache due to neurasthenia. Water (50° to 75° F.) is to be thrown on the chest, back, and abdomen from the hand of an attendant. Better results are obtained in hydriatic institutions by the use of the ordinary douche, the temperature of the water being 50° to 80° F. under a pressure of ten to twenty pounds to the square inch. As the pressure is increased the temperature is to be diminished at each sitting until the limit of the reactive power of the patient is reached. The needle spray is then to be used. Before beginning with the douche three to five minutes should be spent in a hot-air box (temperature not indicated) to dilate the arteries, and afterward a brisk twenty-minutes' walk is taken in the open air. The author advocates Dr. Herter's method of treating migrainous headache by lavage, whether the stomach contains food or not. The temperature of the water should not be less than 105° F. Pain is thus relieved, and if done early an attack may be aborted. The drinking of hot water may be substituted for lavage where the latter is impracticable. Following lavage a rapidly acting cathartic is given. The *rationale* of the treatment is that there is some underlying disease of the nervous system in patients subject to migraine, predisposing to the irritating effects of certain poisons, especially those produced in the alimentary canal by the action of bacteria and by the imperfect digestion of the proteids. These toxins are largely eliminated by lavage and cathartics.—*Yale Medical Journal*, 1899, vol. v. p. 372.

Gold in the Treatment of Anæmia and Malnutrition.—DR. J. P. SHERIDAN rather deprecates the use of iron and "various æsthetic elixirs" as convenient placebos, and recommends in anæmia and malnutrition "a tonic alterative and proper food." He recommends the liquor of gold, arsenic, and mercury bromides. It is tasteless and can be given in milk, and is especially indicated when the above conditions occur in childhood. The secondary anæmia of syphilis following treatment with the usual mercurial preparations can be very successfully treated by it. In too frequent menstruation, and in apparently a variety of diseases of women, a preparation of gold and arsenic—composition not being given—is greatly lauded.—*The New York Medical Journal*, 1899, vol. lxix. p. 634.

Aspidium Spinulosum.—DR. WALTER LAURÊU recommends an ethereal extract made from the rhizome of this plant as an efficacious remedy, in dose of one drachm, for tapeworm. In an instance reported, two hours after administration castor-oil was exhibited, and one and one-half hours thereafter the head and twenty-five feet of a bothriocephalus latus was expelled. Success followed its use in other instances. The substitution of this for the official aspidium is recommended when the plant is more plentiful.—*Therapeutische Monatshefte*, 1899, Heft 4, S. 211.

[Attention has been called to the value of other aspidia in the hope that an explanation may be found for the occurrence of poisoning from the use of the official aspidium. It has been suggested that its toxicity varies with the country of its growth. By using the indigenous aspidium this danger may be avoided. It is a curious fact that in most fatal cases castor-oil has been used. It would be well to substitute some other cathartic.—R. W. W.]

OBSTETRICS.

UNDER THE CHARGE OF

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The Weight of the Fœtus and of the Placenta in Cases of Maternal Albuminuria.—Wippermann (*Archiv für Gynäkologie*, 1899, Band lvii. Heft 3) tabulates thirty-four cases of nephritis during pregnancy and of albuminuria during pregnancy, and has studied the effects of these conditions upon the fœtus and the size of the placenta.

Eleven of these cases had chronic nephritis, and none of them went to the normal termination of pregnancy. Two of the eleven died in the ninth month. Twenty-three patients had acute nephritis of pregnancy, and of these three died shortly after delivery. As regards the placenta, it is interesting to note that in chronic nephritis infarcts are present in the placenta in 90 per cent. of cases. In the acute nephritis of pregnancy infarcts are present in 65 per cent. and absent in 35 per cent.

His investigations show that chronic nephritis profoundly influences the placenta and brings on labor before the natural end of pregnancy. The development of the entire ovum is greatly affected, and many of these children perish.

Albuminuria lessens the development of the fœtus and makes its weight less in proportion to that of the placenta.

It is interesting to compare albuminuria and syphilis, as both conditions result at times in fœtal death, and both influence the development of the fœtus. In each of these conditions the placenta is relatively larger than normally; in the case of albuminuria because the child is less well developed, while in syphilis the increased weight of the placenta results from the deposit of foreign material in its tissue.

Phloridzin-Diabetes in Mother and Child, and its Relation to the Question of the Secretion of Urine by the Fœtus.—In the *Archiv für Gynäkologie*, 1899, Band lvii. Heft 3, Schaller contributes a very interesting paper upon this subject, in which he narrates experiments by the administration of phloridzin in pregnant women and the examination of the urine of mother and child during and after labor. His studies lead him to conclude that we have no evidence that the fœtus secretes urine regularly and discharges it periodically into the amniotic liquid during pregnancy. The kidney secretion of the fœtus normally begins during labor, under the influence of increased pressure in the placental circulation caused by uterine contractions. In the greater number of cases the fœtal bladder is not emptied during birth into the amniotic liquid. It is only in very rare cases that the fœtus will discharge urine into the amniotic liquid, and this occurs when the placental circulation is interfered with by birth-pressure during prolonged labor. The amniotic liquid is not derived from the fœtus, but is a transudate from the maternal bloodvessels.

The kidneys of the new-born child act much more slowly than those of the adult, and a regular performance of their function is not established until some time after birth.

[These very interesting observations throw light upon the very gradual secretion of urine by new-born children. Cases are repeatedly brought to the attention of physicians by careful nurses in which no positive evidence that an infant has secreted urine can be obtained for several hours after birth. Many of these children suffer no inconvenience from the late assumption of the urinary function. If the child be kept warm and its circulation maintained, and it be given water freely, there occurs a discharge of highly colored urine, often rich in uric acid, and the gradual formation of the usual secretion.]

Slowing of the Pulse During the Puerperal State.—VARNIER (*Annales de Gynécologie et d'Obstétrique*, January, 1899) has conducted a series of observations to determine the presence of slowing of the pulse, which has been commonly thought to occur after labor.

In thirty-two pregnant women in whom the pulse was taken during the last two months, it was found to be above 75, and only occasionally below this average in twenty-six, or 81 per cent. Four of these patients had a pulse which averaged 75, and in two of them the pulse was distinctly below this average. A second series of eighteen patients was examined who had been confined, and in whom the pulse was taken in the morning only, while in seventeen others it was taken morning and evening. The duration of these observations was from nine to sixteen days. It was found that of these thirty-five puerperal women but one had a pulse above 75. Twenty had pulses averaging 75 and fourteen below 75. In most of these women the average pulse-rate was as low as 70.

It was found that slowing of the pulse occurs more frequently among the multiparæ than primiparæ. The lowest rate observed was 40, and the highest in multiparæ 68. From the fifth to the eighth day the pulse was usually slowest, then on the seventh day, and occasionally the diminution in the pulse did not occur until the tenth day. A rapid increase in the pulse-beat was usually observed when the patient first left her bed.

Unusual Forms of Puerperal Hemorrhage.—MARX (*Medical News*, March 4, 1899) reports several cases of unusual puerperal hemorrhage.

In one at five months premature labor occurred, followed by the interrupted expulsion of three fœtuses. The last was expelled five weeks after the first. Until expulsion was complete the patient had slight intermittent hemorrhage. In another case a physician mistook a greatly distended blad-